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The Commonwealth of Massachusetts

Executive Office of Environmental Affairs
100 Cambridge Street
Boston, Massachusetts 02202

October 2, 1987

MICHAEL S. DUKAKIS
GOVERNOR

JAMES S. HOYTE
SECRETARY

CERTIFICATE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS ON THE OUTFALL CRITERIA REPORT

PROJECT NAME	: Outfall Criteria Report
PROJECT LOCATION	: Boston
EOEA NUMBER	: 6136E
PROJECT PROPONENT	: MWRA
DATE NOTICED IN MONITOR	: August 26, 1987

The Secretary of Environmental Affairs herein issues a statement that the Report submitted on the above project adequately and properly complies with the Massachusetts Environmental Policy Act (G.L., c.30, s.61-62H) and with its implementing regulations (301 CMR 11.00).

Several thoughtful comments have been received which should be reviewed with these certificate comments prior to adopting outfall criteria.

I note that meeting EPA and DEQE water quality standards is mandated and involve several other criteria as well. Perhaps alternatives should be evaluated for these criteria as meeting or as exceeding all of the permit standards. The full year of data is probably needed as part of the permit application.

I also suggest that monitoring costs be included as part of the annual O & M, and that the permitting and external coordination criteria include lists of the permits and organizations.

All criteria evaluations should identify mitigation considered as part of the project

October 2, 1987
DATE

JAMES S. HOYTE, SECRETARY

JSH/DES/bk

GOVERNMENT DOCUMENTS COLLECTION

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I
J. F. KENNEDY FEDERAL BUILDING, BOSTON, MASSACHUSETTS 02203

September 10, 1987

RECEIVED
SEP 14 1987
OFFICE OF THE SECRETARY OF
ENVIRONMENTAL AFFAIRS

Mr. Steve Davis
Executive Office of Environmental
Affairs - MEPA Unit
100 Cambridge, MA 02202

Dear Mr. Davis:

Attached please find EPA's comments on your draft Proposed Outfall Evaluation Criteria and draft Outfall Siting Evaluation Program Design, dated June 24, 1987. This letter is an ammended version of the August 13, 1987 letter to Mr. Jack Elwood. Thus, please disregard the previous version. In general, the documents are well thought out and represent a sincere effort to incorporate scientific, regulatory and public concerns into the outfall siting decision. What follows is a discussion of some of my general concerns with the documents.

The fact that MWRA is not proposing to weigh its criteria at this time does not present a significant NEPA compliance problem. However, it is important that some mutually agreed upon exclusion criteria be developed to ensure that MWRA does not select an alternative which is incompatible with EPA requirements. For example, the selected outfall site and diffuser design must result in an effluent which meets water quality criteria at the edge of the zone of initial dilution.

The measures used to determine the high, medium or low ratings of various criteria will require further definition. We agree that working groups should be established to develop the additional detail, and request that EPA be made an active participant in such groups. The measures should include how the relative ratings will be established, applicable literature or regulatory benchmark points and a discussion of whether the measures will be applied to impacts before or after mitigation.

Throughout the document, reference is made to further specific studies or techniques which may be employed after analysis of the initial findings. We understand that the scope of the investigations must retain the flexibility to address the initial findings, and propose that joint EPA/MWRA/DEQE working groups evaluate the data as it is developed to decide which specific further studies are appropriate.

As we have commented on the Residual Management documents, the full range of normal operating conditions of the treatment plant must be considered in environmental analyses, especially as they relate to water quality and related criteria.

Lastly, it is imperative from a NEPA standpoint, that the cumulative impacts from both other outfall sources and other components of the Deer Island Treatment Plant be considered when evaluating each criteron.

I hope these comments have been helpful, and would be pleased to discuss them further with you at any any time. Please contact Mr. David Tomey of my staff or myself at 565-4420 should you have any questions.

Sincerely,

Gwen S. Ruta, Chief
Environmental Evaluation Section

Attachments

cc: John Gall, CDM
Steve Lipman, DEQE
James Maughan, M&E
Karen Adams, ACOE

Specific Comments on Proposed Outfall Evaluation Criteria

Page 7, p 5. As discussed in the cover letter, the analysis should account for the full range of normal treatment plant operating conditions and the range of expected effluent conditions.

Page 8, p 4. What does "the degree to which standards are met" mean? For example, will this criterion display the number of expected occurrences of exceedence, the magnitude of the exceedence, or simply that it occurs?

As discussed in the cover letter, adherence to water quality criteria should be exclusionary, that is, all alternatives should meet them to be considered feasible alternatives.

Page 9, p 1. The Part A, non-quantitive water quality standards appear to have been largely left out. Where are these standards to be considered?

Page 9, p 2. Are the high, medium and low measurements to be relative to each other or to some absolute? This can be important in that the relative variance between the alternatives should be reflected in the measurements, as well as their absolute character. If the alternatives vary among themselves, but are all generally good (or bad), this should be reflected. This comment applies to all criteria measured in this way.

Page 10, p 1. Another, possibly more useful, way of examining the issue of important habitats is to look at impacts on habitats of limited replacement or recovery potential. The loss of some important habitat which is widespread but irreplaceable may prove to be significant. Also, there is now no "Avoidance of Unique Marine Resources" category in this version of the criteria.

Page 11, p 1. This criterion needs to be further defined to specify how visual impacts will be measured and where (i.e., in the plume itself, at the shoreline.)

Page 11, p 2. The Harbor Islands should be considered under shoreline impacts.

Page 12, p 1. This criterion may be the appropriate place to consider both potential beneficial and adverse impacts on other types of recreational/ commercial fishing. We assume that the list of fishing types here is representative rather then exclusive.

Page 13, p 2. The reliability criterion should assess whether any site is less impacted by the expected full range of normal operating conditions. Are any sites more likely to cause shoreline or other impacts under adverse operating conditions?

Page 15, p 2. As assessment of the ease of disposal of dredged or excavated material based on their quality should also be considered.

Page 15, p 3. Sensitivity analyses should also be part of the cost criteria. Some alternatives may be more sensitive to certain cost factors, such as energy costs, than others.

Page 16, p 1. The full costs of the disposal of excavated materials should be included in capital costs. This should account for the possible competition for disposal sites and contractors from other major construction projects, which may drive up the cost.

Page 16, p 2. Operating costs should include the costs of monitoring.

Page 16, p 3. The time required for implementation of each alternative should be compared in a relative manner, but should not be compared to any set schedule (including that mandated by the federal court). NEPA requires that alternatives be compared independently of any externally imposed schedule requirement. Therefore, the relative implementability of each alternative can be evaluated, but this cannot be an exclusionary criterion.

Page 17, p 1&2 The use of these as independent criteria is inappropriate under NEPA. The time required for permitting and external coordination can be factored into the "timely implementation" criteria.

Page 18, p 4. In determining where to apply each criterion, both present and potential water and shoreline uses should be considered.

Specific comments on Outfall Siting Evaluation Program Design

Page 7, p 4. We suggest you add that under EPA environmental review, NEPA requires that the EIS process be reopened with a new supplemental EIS if "there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impact" (40 CFR 1502.9(c)(1)(ii).

Page 7, p 5. Impacts must be documented on both an absolute and a relative basis. Impacts which are similar may still be unacceptable.

Page 8, p 1. The broad progam objectives should include the protection of public health.

Page 8, p 2. Other factors affecting alternative locations include:
* differences in cumulative impacts with other discharges
* differences in aesthetics based on visibility of effluent plume,
* different effects on aesthetic and recreational resources on the shoreline, and
* different affects on marine recreation.

Page 9 The Mass Water Quality Standards should include both the Part A and Part C standards.

Page 12 The figure should include recreation and shoreline land use. The "Marine Resources Impact Assessment" should include an assessment of cumulative impacts.

Page 14 — The figure should indicate that coliforms will be predicted even if disinfection is used. Also, the use of coliform as an indicator for pathogens may not address the public health risk associated with swimming and/or the consumption of fish and shellfish (See Morse, D.L. et al, 1986, New England Journal of Medicine 314:678-81). If there is a possibility of a public health concern, other potential pathogens should be considered (EPA is willing to discuss specific suggestions if necessary).

Page 15, p 5. — For other than the mass of water (item 2) it cannot be assumed that the mass flux across the boundary equals the mass discharged from the pipe. It must be assumed that the mass flux across the boundary equals the mass discharged from the pipe minus that deposited in sediments inside the boundary.

Page 16, p 1. — The use of UDKDEN for confirmation and comparison purposes is essential and should be described in this section. In Item 9, what will be the basis for the assumed background and for the ultimate concentrations in deposited sediments versus the dissolved water column?

Page 16, p 4. — Are the estimates of quality of ambient flux waters adequate for future conditions?

Page 17, p 2. — A major assumption in using a dilution analysis to predict concentrations of a particular pollutant is that the pollutant will behave conservatively (i.e. concentration is a strict function of dilution). Many pollutants (e.g. "particle-reactive" metals, hydrophobic organics) exhibit nonconservative behavior. For these pollutants, dilution analysis is inappropriate. Instead, the long term transport of pollutants associated with recently deposited sediments should be considered.

Page 18, p 3. — Coliform concentrations should be predicted for both no disinfection and disinfection alternatives. The far field may be critical for sediment deposition as well as water quality, therefore far field analysis of sediment deposition should be done regardless of other results.

Page 18, p 4. — Sediment deposition should consider organic carbon as well as contaminants. Settling velocity should be estimated assuming particle aggregation via flocculation and pellet formation in the receiving waters. Over what time period will the estimate of sediment deposition and quality be made?

Page 19, p 1. — As discussed above, the proposed method of sedimentation modeling does not appear to account for flocculation. It is our understanding that the models could be easily modified to account for it.

Page 19, p 2. — This paragaph suggests that stratification will be simulated if warrante Our understanding, based on recent meetings with CDM, is that the MWRA does not plan to simulate stratification. We believe that a 2-layer model would give significantly better results than a 1-layer model.

A crucial element of stratification is that water depth is effectively reduced and this leads to higher concentrations than predicted with a 1-layer model. Also the spatial extent of the lower layer is reduced, which also leads to higher concentrations for substances discharged in the lower layer.

Page 20, p 2&3. The potential impacts of shockwaves and blasting vibrations on both marine organisms and structures should be considered.

Page 20, p 4. Rather than focusing specifically on spawning, it would be better to focus on any habitat that is critical to any life stage of an indigenous species.

Page 21, In the first bullet, in addition to dominant species, it is useful to look at any other important sensitive species.

Page 21, In the last bullet, in addition to fish, benthos and zooplankton should be considered.

Page 22, p 2. In addition to resuspension and bioaccumulation, direct toxicity from final sediment accumulation should be examined.

Page 24, p 1. How will the assessment of the effects of plankton changes be done. Is it a purely qualitative analysis? Will the results be used in conjunction with modeling results of nutrient loadings?

Page 25, p 2. The evaluation of benthic communities should not be limited to evaluation of toxics. Input of carbon as an enrichment can be a major impact by shifting community abundance and composition. This must be addressed.

Page 26, p 2. In addition to commercially important species, related forage species, such as herring, mackerel, menhaden and sand lance should be considered. The third sentence should read, "In addition, the potential for accumulation and TOXICITY of toxics in sediments ....." In evaluating the effects of a particular pollutant on marine organisms we suggest the cumulative effects of multiple pollutants be taken into account in at least a qualitative manner.

Page 27, p 2. The impact on fisheries of a discharge related shift in benthos or zooplankton (and thus on food sources) should be included as an additional environmental criterion.

Page 27-32 EPA does not believe that the public health assessment set forth will enhance MWRA's ability to analyze and evaluate prospective outfall sites. The use of federal and state public health based water quality criteria is preferred. It is not clear that the results of the assessment will be sufficiently detailed or accurate to substitute for Gold Book standards.

SWIM: Nahant Citizens Committee
~~Seeking Water Improvement Measures~~
Safer Water in Massachusetts
33 Summer Street
Nahant, MA 01908
July 10, 1987

The Honorable James S. Hoyte
Secretary of Environmental Affairs
Commonwealth of Massachusetts
100 Cambridge Street
Boston, Massachusetts 02202

Re: Proposed Outfall Evaluation Criteria
Massachusetts Water Resources Authority

Dear Secretary Hoyte:

Sarah Warner and her staff at the Massachusetts Water Resources Authority have done a good job of revising the "Proposed Outfall Evaluation Criteria" for the metropolitan Boston sewage treatment facility. They are greatly improved, but Nahant residents have a number of comments and suggestions.

The Proposed Outfall Evaluation Criteria have been divided into two categories, Impact Concerns and Environmental Criteria. SWIM suggests that one additional Impact Concern be added:

Avoidance of Degradation of Water Quality.

This Impact Concern is related to the real danger of making water quality worse in Massachusetts Bay by locating an inadequately treated, primary sewage effluent outfall in Class SA waters. The Commonwealth has recognized the importance of preventing water quality degradation by adopting the Antidegradation Provisions in the Code of Massachusetts Regulations CMR 314:4.04 as part of the Massachusetts Water Quality Standards.

SWIM also suggests that three Environmental Criteria be included:

Combined Impacts Due to Other Sources of Contamination.

Impacts of Routine Plant Upsets and High Flow Conditions

Impacts of Catastrophic Failures

These three criteria address SWIM's concern for the cumulative impact of the many other sewage outfalls and other sources of pollution in Massachusetts Bay; for impacts when and if the plant has routine maintenance problems or inability to treat all the effluent during storm conditions; and for catastrophic impacts caused by serious design or construction flaws, inability of the MWRA to build a secondary sewage treatment plant before the year 2000, or such Acts of Man as an airplane landing in a raw sedimentation tank. Although there may be no difference in probabilities of malfunction for various outfall locations, it is certainly possible to assess the difference in impacts at the various outfall locations.

Additionally, SWIM is very much concerned about the degradation of water quality standards for dissolved oxygen by the MWRA. The Massachusetts Surface

Water Quality Standards clearly state that the dissolved oxygen criterion shall be a minimum of 6.0 mg/l. The MWRA has stated publicly that they are interpreting this to mean vertically averaged throughout the water column. Vertical averaging means that at some point in the water column the dissolved oxygen could be less than 6.0 mg/l, as long as the dissolved oxygen is higher somewhere else.

This is a serious matter, since the bottom organisms are the most vulnerable to lack of dissolved oxygen, and the bottom is where a low dissolved oxygen content is most likely to occur. Imagine a situation where the bottom two inches are very low in oxygen, but the next 60 feet up have plenty of oxygen...with vertical averaging, there would be no problem, even if conditions on the bottom were quite dangerous to benthic life. In fact, we are now being told that the present outfall, just off Deer Island, meets the dissolved oxygen criterion if it is vertically averaged. Obviously, such a "criterion" means less than nothing.

What is going on here? Are the standards being changed so that the MWRA sewage outfall can send sewage without secondary treatment into Massachusetts Bay? Where was the public participation which is supposed to take place if water quality standards are changed? Where is the Environmental Protection Agency approval which is supposed to be obtained if water quality standards are changed?

When an economic comparison is done of various outfall siting alternatives, the beaches, sailing, scuba diving, and other recreational values in Nahant, Hull, the Boston Harbor Islands, and the North and South Shores should be evaluated. Moreover, the value of commercial and recreational fishing and lobstering should be estimated. When these values are considered versus the cost of an extended outfall, the need for a longer outfall and for early secondary treatment may become clearer. In addition, state and federal assistance in the project should be taken into account. For example, if the outfall costs $20,000,000 per mile but 90 per cent of the capital cost is paid for by the state and federal government, the cost to ratepayers will be much lower. The cost of the outfall should also be compared to the cost of the overall project, and Nahant requests that the MWRA substantiate all cost estimates with appropriate reference material.

Our other concerns are detailed in the enclosed compilation of comments by Nahant readers of the document. Nahant citizens very much appreciate your attention to our water quality. Surrounded by water as we are, we are very much aware of the need for vigilance in environmental protection.

Sincerely yours,

Polly Bradley

Polly Bradley, President
SWIM - Nahant

cc: Michael Deland, EPA
Paul Levy, MWRA
David Shepardson, MEPA
Richard Delaney, CZM
Peter Shelley, CLF
Dr. Kenneth Sebens, Northeastern Univ.
Board of Selectmen, Nahant

July 10, 1987

NAHANT COMMENTS ON "PROPOSED OUTFALL EVALUATION CRITERIA"

The following are comments pertaining to the MWRA document "Proposed Outfall Evaluation Criteria," and are submitted by concerned residents of Nahant.

1. The document states on page 3 that, "The outfall evaluation criteria have not been weighted, i.e. no single criterion has been given greater standing than any other. The relative merits of each site will be displayed to the decision makers, permitting diverse points of view to be heard regarding site selection process." The document does not make clear who the decision makers will be and if they, in fact, will represent diverse points of view. For example, the MWRA board of directors may be entirely concerned with costs of the project and not the impacts on the shorelines of Nahant. It is of great importance to establish weighting factors for the criteria through the participation of the CAC, the outfall siting subcommittee and the public in general, as is being done in the Residuals Management Facilities Plan.

2. The document states on page 3 that, "Commentors should be aware, however, that the effluent quality is not a variable in the outfall siting assessment." On April 9, 1987, Nahant

comments addressed the MWRA document FC-30A, "Criteria for Detailed Evaluation of Alternatives," specifically Sections 1.0, 2.0, and 3.0. The comments then stated that, "Appropriate planning should take into consideration water quality issues during the evaluation of treatment unit processes: including preliminary treatment, primary treatment, secondary treatment and certainly disinfection as well as the ways in which these processes will be assembled. Water quality issues should be considered when evaluating the performance of the treatment alternatives during average as well as high (wet weather) sewage flow conditions..."

It is becoming clear that the outfall siting evaluation has been entirely separated from the Facility Planning process. It is unclear if water quality concerns and outfall siting issues were addressed in the development of Volumes II and III of the Facility Plan. Nahant residents maintain that potential adverse impacts associated with water quality degradation and damage to marine resources should be of primary concern in the evaluation of the wastewater treatment unit processes.

The efficiencies of these unit processes should be adjusted or different unit processes should be designed if the evaluation for the outfall siting indicates the need for an upgraded level of treatment or for a mode of disinfection other than chlorination. The MWRA should coordinate the outfall siting and Facility Planning process with other activities,

such as the possibility of CSO retention facilities which would prevent high flows from receiving only primary treatment. Without such CSO retention facilities, under high flow conditions secondary treatment will be bypassed and excess flows will receive inadequate treatment.

3. On page 4 of the document an additional concern should be added to the Impact Concerns. This concern, Avoidance of Degradation of Water Quality, should evaluate the extent of degradation of water quality that would be caused by moving the sewage effluent outfall from SB class water, which is already degraded, to SA class water, which is the classification for the cleanest water in Massachusetts.

4. Pages 6 and 7 of the document address regulatory requirements and reference Appendix A - code of Massachusetts Regulations (CMR) Section 314. It should be noted that CMR 314:4.03 and 4.04 require the attainment of dissolved oxygen minimum of 6.0 mg/l for SA class water and the attainment of Antidegradation Provisions, respectively. The MWRA has publicly stated that it is planning to use a "vertically averaged" dissolved oxygen criterion and that it is planning to discharge primary treated sewage effluent in violation of the Clean Water Act into SA class water. Both of these actions appear not in compliance with CMR 314:4.03 and 4.04.

5. On page 7 the document states that, "A criterion has not been proposed for the Impact of Catastrophic Failure because it was felt that it would not be possible to realistically assess any difference in probability of such an event happening." While it may not be possible to assess a difference in probabilities for various outfall locations, it is certainly possible to assess the difference in impacts of a catastrophic failure at the various outfall locations. This criterion should be included and impacts of catastrophic failure should be studied. The probability of plant malfunction should be assessed taking into account design and construction errors, mismanagement, as well as planning, design and construction delays.

6. Two additional criteria should be added to the list to adequately assess the stated concerns. These are:

Impacts of Routine Plant Upsets and High Flow Conditions

The MWRA should assess the frequency of various plant upsets by contacting other secondary and primary treatment facilities in the U. S. which handle comparable flows to those of metropolitan Boston. Duration of such upsets and their impacts should be assessed. Decreased treatment efficiencies of unit processes and associated impacts should also be assessed during the high flow conditions.

Combined Impacts Due to Other Sources of Contamination

The MWRA should take into consideration other sources of pollution which may by themselves not pose unacceptable

water quality concerns, but which, in combination with 500 mgd flows of Metropolitan Boston, will result in water quality disaster.

7. The other criteria proposed for assessment of the Impact Concerns appear adequate. However, although the document states on page 5 that, "The criteria that follow are being put forth for discussion and represent the MWRA's proposed specific measures of acceptability," the discussions of the individual criteria do not address specific measures of acceptability in any detail. The following are suggestions for further defining specific measures for the proposed criteria:

Ability to Meet EPA Ambient Water Quality Criteria

The MWRA should perform analyses which will show that the sewage effluent from the outfall will meet the conditions of the NPDES discharge permit. This demonstration should include the NOEL acute and chronic toxicity testing of the whole chlorinated sewage effluent.

Conformance with Massachusetts Water Quality Standards

The MWRA should explain why it proposes to use a "vertically averaged" dissolved oxygen criterion and why this criterion is considered to be a part of CMR 314:4.03. The MWRA should

also state that it will comply with the Antidegradation Provisions of the Masssachusetts Water Quality Standards, CMR 314:4.04.

Avoidance of Adverse Sediment Accumulation

The document states that, "Alternatives will be rated high, medium or low, reflecting their (biota) ability to avoid stress from either deposition or resuspension." This statement implies that the evaluation will be based on the avoidance behavior of organisms, and not on the evaluation of acceptable deposition of organic matter and toxic contaminants. Deposition of sediment should be at a rate which does not produce stress in the biota. The MWRA should evaluate dissolved oxygen demand exerted on the benthic biota during resuspension of sediments.

Ability to Protect Local Species from Adverse Stress

The MWRA should evaluate the likelihood of spreading the already observed liver lesions and fin rot disease found in winter flounder, as well as the shell and black gill disease found in lobster from Boston Harbor into waters of Massachusetts Bay.

Avoidance of Areas of Important Habitat

The MWRA should state what is considered an area of important habitat.

Ability to Meet Quality Criteria to Prevent Taste and Odors

The MWRA should state what constituents of sewage effluent can impart objectionable taste and odors.

Conformance with State Coliform Criteria

This criterion should be expanded to include the evaluation of actual pathogenic organisms, such as viruses and enterococcus bacteria, not just harmless indicator bacteria (E. coli) which has a rapid die-off in salt water. That there are no state criteria for actual pathogens should not prevent the MWRA from assuring the public that the shellfish will be safe to eat and that children will not get diarrhea from swimming at a local beach.

Maintenance and Enhancement of Aesthetic Conditions

This criterion should read Attainment and Maintenance of Aesthetic Conditions. Also, besides the concern with enhanced productivity and suspended solids, the MWRA should be evaluating the presence of floatables during plant upsets and failure, as well as during high flow conditions.

Protection of Shoreline Areas

This criterion should also address the size and the proximity to shorelines of the "mixing zone" or the "zone of initial dilution." The MWRA has previously stated that the water quality criteria would not be met in this zone or plume. The proximity to shorelines of a sewage plume and the upwelling events associated with the surfacing of such a plume should be evaluated by the MWRA.

SWIM - Nahant Citizens Committee for
Safer Water in Massachusetts

SWIM: c/o Northeastern University
Marine Science and Maritime Studies Center
East Point, Nahant 01908
August 12, 1987

RECEIVED
AUG 12 19[illegible]
OFFICE OF THE SECRETARY OF
ENVIRONMENTAL AFFAIRS

Mr. David Shepardson
MEPA Unit
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, Massachusetts 02202

Dear Dave:

SWIM is becoming increasingly concerned about the possibility of an MWRA sewage outfall near Nahant. It would seem that the court schedule may be dictating the outfall length...there may not be time to build an outfall to a safe distance from shore.

I'd appreciate it very much if you'd read the enclosed material SWIM prepared for the Outfall Forum...it outlines our concerns. In addition to the problems of location and schedule (outfall 1994, secondary 1999), we have some serious problems with the plant itself, which it appears will not comply with the Clean Water Act, the NPDES Permit, or the Massachusetts Surface Water Quality Standards. This isn't just legal nitpicking: the laws and regulations are the only things we have to make sure that what comes out of the outfall is clean enough to protect the environment.

Many thanks for your continuing concern.

Sincerely,

Polly

Polly Bradley

(581-007.5)

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SWIM - Nahant Citizens Committee for
Safer Water in Massachusetts

Outfall Forum -- August 11, 1987

BOSTON'S SEWAGE OUTFALL - WHERE? WHEN? WHY?

LOCATION OF OUTFALL -- Boston's sewage outfall does not have to go in anyone's back yard...not Nahant's, not Hull's. Why not build the outfall long enough so it doesn't pollute anyone?

Why did the MWRA choose to study only outfall sites as near or nearer than the sites rejected for primary treatment in the 301(h) waiver process...then propose putting primary treatment in those very spots?

INADEQUATE STUDY OF POTENTIAL OUTFALL LOCATIONS -- Why is a study of only 6 months being done for a decision which will affect Massachusetts Bay for decades? Shouldn't the schedule include at least a full year of data gathering? Water conditions are radically different in winter, spring, summer, and fall. What are the currents during all seasons of the year? How are the sediments distributed during the entire year? What are the bottom organisms and how will they react to the heavy metals, PCB's, and other toxics in the effluent? What is the topography of all potential outfall sites?

SCHEDULE (OUTFALL 1994, SECONDARY TREATMENT 1999) -- The court order calls for putting primary effluent into Massachusetts Bay, but also says the MWRA must prove it won't pollute Massachusetts Bay. This is contradictory. Will primary effluent pollute Massachusetts Bay? The 301(h) waiver denial says "yes."

How long will it take to build a mile of outfall? If the current schedule is not changed, will the schedule dictate the length of the outfall?

Will there be a ratepayers' revolt once Boston's sewage is safely out of Boston Harbor polluting Massachusetts Bay instead? Will the secondary plant ever be built? Will a legislative exemption be enacted for MWRA?

PRETREATMENT PROBLEMS -- The pretreatment program is designed only to treat toxics currently on the EPA list...which includes only a few of the dozens of toxic chemicals. What about the other chemicals? What about enforcement of the pretreatment program? What assurance do we have that the industries will clean up their act enough to keep Massachusetts Bay clean?

MAINTENANCE PROBLEMS -- The current MWRA plant is beset with maintenance problems of all kinds. What assurance do we have that the plant will work properly? What if it breaks down? What will happen after the year 2020 -- the design life of the plant? What if it isn't replaced in 2020? Twenty seven years will have passed between the enactment the Clean Water Act of 1972 and the scheduled completion of the Deer Island Secondary Treatment Plant in 1999. At this speed, shouldn't the MWRA start planning in 1993 to replace this new plant in 2020?

WITH ALL THESE PROBLEMS WITH THE MWRA PLAN, DOESN'T IT MAKE SENSE TO PUT THAT OUTFALL WAY OUT THERE PAST THE 301(h) SITE? ISN'T A LONG OUTFALL THE CHEAPEST INSURANCE POLICY AGAINST POOR PLANNING, POOR PRETREATMENT, POOR MAINTENANCE, AND DELAYS IN IMPLEMENTATION OF SECONDARY TREATMENT?

ECONOMICS

* One mile of outfall pipe will cost each person in the district only 8c per year. (Based on 8% twenty year bond and a user population of 2.5 million).

* Cost of an outfall 9 miles from Hull, Nahant, and Marblehead will be less than 10% of the Sewage Treatment Facilities cost.

* 47.4% of the $88 million annual lobster harvest in Massachusetts is caught between Manchester and Scituate in less than 120 feet of water. (Data from Division of Marine Fisheries).

* Shorefront property values on the North and South Shores are worth billions.

* Clams, mussels, flounder, and lobsters caught near shore are too often diseased and inedible. Sixty per cent of the clams eaten in Massachusetts are from Maryland. We want our native seafood back.

* Public beaches are priceless.

BOSTON'S SEWAGE OUTFALL - BASIC FACTS

The Massachusetts Water Resources Authority (MWRA) is planning to build a sewage outfall pipe within 2 to 6 miles of Nahant and/or Hull. The sewage of 43 Greater Boston cities and towns will be deposited through this outfall.

The pipe will be approximately the size of the Callahan Tunnel AND will be the largest sewage outfall in the United States. It will dump an average of Five Hundred Million (500,000,000) gallons of waste every day and will dump up to One Billion Two Hundred and Twenty Three Million (1,223,000,000) gallons after storms.

Drifter studies have shown that effluent would go back to shore, towards Nahant, Winthrop, Revere, Lynn, Swampscott, Salem, Beverly, Manchester, and Gloucester, as well as the South Shore.

The MWRA intends to being pumping before the treatment plant is completed. The outfall will be completed in 1994, and the sewage will not be fully treated until 1999. For at least five years, sewage with primary treatment (solids filtered out and chlorine added) will be discharged into Massachusetts Bay.

SWIM: Nahant Citizens Committee for
Safer Water in Massachusetts
c/o Northeastern University
Marine Science and Maritime Studies Center
East Point, Nahant, Massachusetts 01908

For further information, contact Polly Bradley, President, SWIM, 581-0075
or William J. Coffey, Chairman of the Board, SWIM, 581-1424

RECD.
SEP 15 1987
OFFICE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS

SWIM - Nahant Citizens Committee for Safer Water in Massachusetts

SWIM'S CONCERNS ABOUT THE PROPOSED BOSTON SEWAGE OUTFALL

The Massachusetts Water Resources Authority (MWRA) is planning to build a new sewage outfall pipe (operational in 1994) through which the sewage of 43 Greater Boston cities and towns will be deposited into Massachusetts Bay.

Presently Greater Boston sewage receives only outmoded primary treatment (at the Deer Island and Nut Island plants). An improved primary treatment plant at Deer Island is scheduled to be operational in 1995.

Boston has been mandated by Federal Court to build a secondary treatment plant because the sewage from the 43 cities and towns, if given only primary treatment, will pollute Massachusetts Bay (as it is doing now to Boston Harbor). This secondary treatment plant is scheduled to be operational in 1999.

PROBLEM: Between 1994 and 1999, Greater Boston's sewage, which has received only primary treatment (and for one year, only outmoded primary treatment), will be polluting Massachusetts Bay.

PROBLEM: Studies have shown that outflow from the pipe will go back to shore, towards North Shore and South Shore communities. So between 1994 and 1999, the North and South Shores may be polluted by Boston's primary treated wastes, depending on the location of the outfall.

Right now, the plan is to place the outfall at one of seven locations (see map on other side). MWRA will make a tentative decision regarding the location of the outfall in November and a final decision next May. This decision, which will affect Massachusetts Bay for decades, will be based on a 6-month study begun last Spring.

SWIM WANTS:

1. the outfall placed outside the tidal reach - beyond where the effluent can reach the shore - the farthest from shore and in the deepest water possible.
2. postponement of the final decision regarding outfall location, which would allow a full-year's study of all four seasons' conditions.
3. work on the secondary treatment plant expedited so that the plant can be operational as soon as possible - sooner than 1999.

WHAT CAN YOU DO?

1. Make a donation to help fight pollution (suggested donation per household-$25). Send checks, payable to SWIM, to SWIM, c/o Northeastern University Marine Science and Maritime Studies Center, East Point, Nahant, MA 01908.
2. Write a letter, expressing your concerns, to any or all of the following:
   - Governor Michael S. Dukakis, State House, Boston, MA 02133
   - Secretary of Environmental Affairs James S. Hoyte, 100 Cambridge Street, Boston, MA 02202
   - Regional Administrator Michael Deland, Environmental Protection Agency, J. F. Kennedy Federal Building, Boston, MA 02203
   - Paul Levy, Executive Director, Massachusetts Water Resources Authority, Charlestown Navy Yard, 100 First Avenue, Boston, MA 02129
   - Representative Nicholas Mavroules, 70 Washington Street, Salem, MA 01970
3. Come to the "North Shore Town Meeting for Safer Water in Massachusetts" (see other side for details)

DS

SWIM - Nahant Citizens Committee for Safer Water in Massachusetts

c/o Northeastern University
Marine Science and Maritime Studies Center
East Point, Nahant, MA 01908
September 22, 1987

RECEIVED
SEP 24 1987
OFFICE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS

The Honorable James S. Hoyte
Secretary of Environmental Affairs
Commonwealth of Massachusetts
100 Cambridge Street
Boston, Massachusetts 02202

Re: MEPA #6136
Outfall Evaluation Criteria

Dear Mr. Hoyte:

SWIM and concerned Nahant residents would like an additional impact concern added to the draft "Proposed Outfall Evaluation Criteria": Avoidance of Degradation of Water Quality.

Three environmental criteria should be added: Combined Impacts Due to Other Sources of Contamination; Impacts of Routine Plant Upsets and High Flow Conditions; and Impacts of Catastrophic Failures.

Enclosed is a copy of a letter sent to you in July regarding the Draft Outfall Evaluation Criteria. Please consider this letter as a part of SWIM's current MEPA comment. It will give the rationale behind the above requests and will give other comments which as far as we can tell from reading the current document are a propos as ever; we do not see that any substantial changes have been made in the document since July.

SWIM is particularly worried that the criteria "Timely Implementation" may turn out to be in reality the only criteria actually used to determine outfall length. The schedule, which leaves only three years for building the outfall, may dictate where the outfall goes. This should not happen. The outfall location should be determined by environmental considerations, not by an arbitrary schedule. If necessary, the schedule should be changed rather than the outfall location brought so close to shore that it causes environmental degradation to neighboring communities.

We are depending on you to protect BOTH Boston Harbor AND Massachusetts Bay.

Sincerely yours,

Polly Bradley

Polly Bradley, President
SWIM

cc: Michael Deland, EPA
Paul Levy, MWRA
David Shepardson, MEPA
Richard Delaney, CZM
Peter Shelley, CLF
Dr. Kenneth Sebens, Northeastern University
Board of Selectmen, Nahant

Massachusetts Audubon Society

Massachusetts Audubon: Boston

3 Joy Street #50
Boston, Massachusetts 02108
(617) 367-1026

RECEIVED
SEP 25 1987
OFFICE OF THE SECRETARY OF
ENVIRONMENTAL AFFAIRS

September 23, 1987

Secretary James S. Hoyte
M.E.P.A. / E.O.E.A.
100 Cambridge St.
Boston, MA 02202

SUBJECT: PROPOSED OUTFALL EVALUATION CRITERIA and OUTFALL SITING EVALUATIONS PROGRAM DESIGN

Dear Secretary Hoyte:

The Massachusetts Audubon Society believes that the Outfall Evaluation Criteria and the Evaluations Program Design are critical to assuring that the outfall siting decision is both timely, yet environmentally sound. Attached are the comments of our staff marine ecologist, Thomas Hruby. Dr. Hruby has been an active member of the E.O.E.A. Technical Advisory Group which has been evaluating the harbor clean-up projects and the needed harbor research agenda.

The following are some additional comments/issues:

1) Are current regulatory limits sufficient to judge the impact such as maintenance and enhancement of aesthetic conditions? How will "an increase in primary productivity leading the excessive algal blooms" (P.11 Criteria document) be measured? The M.W.R.A. must be prepared to explain how they will determine this and how it indicates fully the protection of shoreline areas criteria.

2) How might variations in data results affect the modelling results? Depending on the elasticity, insufficient information makes more or less of a difference. If the data is incomplete and present extrapolations prove wrong, how far off will the model results be?

3) Page 18 of Program Design -- Is the model being used correctly?

4) Page 23 of Program Design -- Do others agree that the same analytical approach can be used for assessing both primary and secondary effluent?

Thank you for the apportunity to submit these comments.

Sincerely,

Betsy Johnson

Betsy Johnson
Director, Mass. Audubon Boston

September 22, 1987

COMMENTS ON DRAFT OUTFALL SITING PROGRAM

T. Hruby
Massachusetts Audubon Society

The following comments are on the 'Outfall Siting Evaluations Program Design' circulated by the Massachusetts Water Resources Authority on June 24, 1987.

The assessments of no 'significant' impacts for specific discharge sites, and the choice of one site will be based on a mathematical model of circulation in the area. Predictions from a model, however, are only as good as the data input into the model. The question of the adequacy of the adequacy of the data to be used has been brought up by several members of the EOEA Technical Advisory Group on Boston Harbor. I do not believe this question has been properly addressed in the program design. Given the highly seasonal nature of conditions in the harbor, an explanation is needed why the proponents believe data collected only during the summer will provide enough information on actual maximum/minimum conditions that can be expected at the proposed sites. My concerns of the adequacy of the data to be collected are based on the following two points:

1. In the marine environment there are many cycles which impose minimum/maximum values to environmental variables such as tidal cycles, lunar cycles, seasonal cycles, multi-year cycles,etc. Seasonal cycles senerate minmimum/maximum values that are larger than those from most other cycles and for this reason such information is often used in models to predict the minimum/maximum conditions under other circumstances where values are higher (e.g. 10 - 100 year storms, 17-18 year solar cycle, etc.), or rare convergences of cycles that magnify each other (e.g. major storm with spring tides). As outlined in the program design general minimum/maximum conditions will be predicted using data collected over only a two month period which represent values collected over some of the lesser cycles (tidal, lunar). Since this is not a common way of modelling general long-term maximum/minimum conditions a scientific justification is needed as to why it is acceptable in this situation. In terms of Figure 3 (p.14) I do not believe evaluations/interpretations of points 1,2,13,14,15 can be adequately done using only data from two summer months.

2. The program design call for overcoming some of the shortcomings of only two months of data by using existing data. Much of this data, however, was not collected at the exact locations proposed for the outfall, and there is some questions regarding its applicability. Recent studies of the sediments in and around Boston Harbor by the U.S. Geological Survey have indicated that bottom sediments change rapidly on a very small scale suggesting that environmental conditions are very heterogenous. If this is the case it becomes difficult to model conditions by interpolating and averaging data from nearby locations to the specific proposed locations. The decision will be based on identifying differences between locations, and unless we know the exact conditions at each location in this heterogeneous environment it will be difficult to make any assessments.

September 22, 1987

COMMENTS ON DRAFT OUTFALL EVALUATION CRITERIA

T. Hruby
Massachusetts Audubon Society

The following comments are on the 'Proposed Outfall Evaluation Criteria (Draft)' circulated by the Massachusetts Water Resources Authority in June 1987.

1. An assessment of the 'impacts of catastrophic failure' should not be omitted from the site evaluation analysis. It may not be possible as stated on page 7 'to realistically assess any difference in the probability of such an event happening' between the different sites. An assessment, however, should be possible if a different approach is taken. If one assumes that a catastrophic failure does occur at some time the sites can be evaluated, using the procedures described, to determine which will have the lowest environmental and health impacts. The mathematical models and risk assessments can be made assuming untreated sewage is released at the outfall site.

An assessment of the impacts of a catastrophic, or even partial, failure is important given the past performance history of secondary treatment facilities in this country. A recent GSA report has found that approximately 9 out of 10 secondary treatment facilities in this country do not always perform as specified.

2. I question whether the proposed enviromental criteria listed in Table 1 will adequately address the concerns of public health as identified in the 'Safety and Palatability of Finfish and Shellfish' and 'Protection of Bathing Area & Recreation'. My concerns are based on two reasons; the first is that recent studies are indicating that the coliform standards do not provide adequate protection. The concentrations of pathogens in sea water are not directly linked to the concentrations of coliform bacteria. My second concern is that acceptable levels of pollutants in food have been specified by the EPA for only a few of the many thousands of toxicants released. Basing decisions of on EPA criteria will not adequately assess the public health risks of toxicants for which acceptable levels do not exist.

The draft 'Outfall siting evaluation program design' of June 24, 2987 indicates that a public health risk assessment will be done. This risk assessment should provide the information needed to address my concerns above. I would, therefore, reccommend that an additional criterion identified as 'risk assessment' be added to the matrix of environmental criteria.

DS

The Commonwealth of Massachusetts

Executive Office of Environmental Affairs

100 Cambridge Street

Boston, Massachusetts 02202

COASTAL ZONE MANAGEMENT

NOT sent due to Agreement w/ Dave

Jim

September 23, 1987

Mr. Steve Davis, Director
MEPA Unit
100 Cambridge Street
Boston, MA 02202

Re: Extension of MEPA Public Comment for the Draft Outfall Evaluation Criteria Document for Deer Island WWTF

Dear Mr. Davis:

The Massachusetts Coastal Zone Management office requests that an extension of the deadline for receipt of public comments by MEPA for the Draft Outfall Evaluation Criteria document for the proposed secondary WWTF at Deer Island. We request that the deadline be extended to October 5, 1987.

The reason for this request is that the document was not received from the MWRA by CZM until September 15, 1987. This project is a very important and complicated proposal and adequate time must be allowed principal review agencies to thoroughly review the information in these documents to generate meaningful and well thought out comments. CZM is listed in the MEPA regulations for receipt of all materials for activities proposed in the coastal zone. The October 5 date was arrived at by considering the receipt date by CZM of the document and adding the mandatory 20 day comment period.

I appreciate your consideration and await your reply.

Sincerely,

James O'Connell
Project Review Coordinator

JO:dc
cc: Cindy Anthony, MWRA

COASTAL ZONE
MANAGEMENT

The Commonwealth of Massachusetts

Executive Office of Environmental Affairs
100 Cambridge Street
Boston, Massachusetts 02202

RECEIVED
SEP 30 1987
OFFICE OF THE SECRETARY OF
ENVIRONMENTAL AFFAIRS

MEMORANDUM

TO: STEVE DAVIS, DIRECTOR, MEPA UNIT

FROM: RICHARD F. DELANEY, DIRECTOR, MCZM

DATE: SEPTEMBER 29, 1987

RE: PROPOSED OUTFALL EVALUATION CRITERIA FOR THE SECONDARY TREATMENT FACILITIES PLAN, MASSACHUSETTS WATER RESOURCES AUTHORITY

The Massachusetts Coastal Zone Management (MCZM) Office has reviewed the Proposed Outfall Evaluation Criteria for the Deer Island Facilities Plan as noticed for receipt of public comment in the Environmental Monitor on Sept. 11, 1987.

The Basis for Criteria appears so sufficiently general that specific criticisms are not possible. The Impact and Engineering Concerns seem adequate, but it is not clear how the information from the data collection program, which was reviewed by this office as part of an evaluation of the Outfall Siting Evaluations Program Design, will be applied to the Proposed Evaluation Criteria. We know what data are being collected but we still do not know how they will be used to decide among the seven sites. Indicator levels of high, medium, and low are given for several of the environmental criteria, but there is no explanation for what range of values will be represented by each level, how the range will be decided, and what the levels will mean. From the document it is also not clear that the decision to limit the final choice to one of the seven selected sites was correct, or whether another site, not presently under investigation, might be more suitable. The decision not to examine other, and perhaps more distant, sites will need to be carefully defended in the final document and might include information on preliminary physical oceanographic findings, the value of the fisheries, or threats to endangered species. The choice of sites for investigation must be thoroughly justified.

RFD/JPS/sla

MEMORANDUM TO: E.O.E.A.

FROM: Dr. Kenneth P. Sebens
E.O.E.A./T.A.G.
and Director, Marine Science Center,
Northeastern University

COMMENTS ON: Outfall Siting Criteria
M.W.R.A. August 1987

The outfall criteria proposed by the M.W.R.A.are very general in outline and do not give a very clear picture of the exact type of information that will be used for the ultimate decision. This document restates the state and federal criteria which have been left broadly defined so as to apply to a variety of possible situations. The following are specific suggestions:

1. EPA criteria cover very few toxic substances. Many, even those thought to be direct causal agents of human and fish diseases, have not had criteria set for them yet (e.g. PAHs).Focusing on EPA criteria along is insufficient. A conservative process for dealing with a broad range of toxicants is needed for the case where no EPA criteria exist.

2. A decision will probably be made based on only a few months data at the specific sites in question. This is insufficient for physical oceanographic modelling or for even a basic description of the biological community at the proposed sites. The evaluation criteria should include plans for continued study for at least a year, going past the point where a 'tentative' decision has been made. In other words, an affirmation is needed that any decision made now will be backed up by enough data to complete one year of study, preferably two years. Most environemntal studies include at least two years because fluctuations of the biota within one year cannot be considered as predictable seasonal events if they are observed only in one year.

3. An assessment of the effects of catastrophic failure of the treatment plant can be used to differentiate between sites because, although site selection does not affect probability of failure or mode of failure, it does affect how much damage such a failure would cause to the environment. For example, sites near shore are more likely to suffer extensive damage following catastrophic failure than are sites in deeper water with greater dilution, dispersion, and transport away from shore.

4. Commercial on the water activities are dominated by the lobster fishery and gillnetting in the nearshore areas where the outfall might be sited. Quantitative surveys of lobster pot buoy placement (via boat transects) or aerial surveys of lobster boat activity could discriminate between sites in terms of exact use rates by lobster fishermen.

Similarly, direct observation of gillnet placement and other commercial fishing activity, on a site-specific basis, is needed to discriminate between sites. It is unclear from the various documents I have examined whether or not such quantitative surveys are being conducted in the area surrounding each proposed site.

5. Similarly, recreational use could be assessed easily by aerial photography of boat traffic over several summer days and weekends. This could also be done on a site-specific basis. I have observed that sailing and motoring activity drops off rapidly a few miles offshore, but that use rates depend strongly on factors such as bluefish runs and other transitory phenomena. Ocean boating is more of a 'sustained contact' recreation than might be expected given the 'spray' encountered on most days. Placement of an outfall site in a region that has one tenth the boat traffic compared to a site closer to shore could reduce this potential contact substantially.

6. Whenever a site is chosen, in addition to the one or two years of descriptive data necessary to determine site suitability, an extensive monitoring program should be set up which would continue during the years before, during, and after construction. Such a program would include sites at the proposed outfall site, at several distances from it, and at a comparable site far enough away not to be directly impacted. Monitoring of chemical constituents of the water and sediments would be combined with sampling of benthic biota , finfish, and shellfish. Community composition and organism flesh concentrations of toxicants would be monitored as indicators of the continued appropriateness of disposal at this site. Several years of 'baseline' data are needed to insure that trends seen after construction would be detectable compared to the initial condition. Such a monitoring study could be part of a larger Massachusetts Bay study which would track both natural communities and impacted areas for the next several decades, along with monitoring of bay-wide pollutant concentrations in water and sediments.

DS

S. David Graber
Consulting Engineer

118 Larson Road
Stoughton, Massachusetts 02072
(617) 341-0390

Environmental/Hydraulic/Mechanical Engineering
Water Quality Management Planning
Environmental Analysis/Modeling/Research

September 24, 1987

RECEIVED
SEP 25 1987
OFFICE OF THE SECRETARY OF ENVIRONMENTAL AFFAIRS

The Honorable James S. Hoyte, Secretary
Executive Office of Environmental Affairs
100 Cambridge Street
Boston, MA 02202

SUBJECT: Deer Island WWT Facilities Plan
Outfall Evaluation Criteria (EOEA #6136)

Dear Mr. Hoyte:

On behalf of the Selectmen of the Town of Winthrop, this letter provides comments on the Facilities Plan Outfall Evaluation Criteria. The document on which our comments are based is that received from MWRA on September 3, 1987, which appears identical to those also received on June 24 and June 26, 1987.

We greatly appreciate the responsiveness to CAC input reflected in the document, and believe it provides a sound conceptual basis for evaluation of outfall alternatives.

As in our previous comment letters on Evaluation Criteria, we will focus for present purposes on the inclusion of appropriate criteria rather than the detailing of those criteria. We have also referred to our ENF comments of July 29, 1986 for further, still-current, details relative to many of the criteria, and again do so here. Subsequent correspondence and numerous discussions with MWRA and their consultants have supplemented those criteria from Winthrop's (and we believe a broader) perspective.

In keeping, therefore, with what we believe to be the intent at this level, we reiterate our general agreement with the outfall evaluation criteria as presented. The "proof" will be in the sound application of those criteria, a complex process which we will follow with considerable attention to detail.

We believe that clear, pointed, and detailed exposition of the application of outfall evaluation criteria is crucial to public acceptance of outfall evaluations and furtherance of Boston Harbor cleanup. We urge MWRA and their consultants to not only develop thorough, innovative, and technically sound analyses, but to also place the necessary emphasis on the reporting of those efforts.

Thank you for the opportunity to submit these comments.

Very truly yours,

S. David Graber

S. David Graber

cc: Mr. Robert A. DeLeo, Chairman, Winthrop Board of Selectmen
Mr. John L. Lyons, Winthrop Selectman
Mr. Robert E. Noonan, Winthrop Selectman
Ms. Virginia L. Wilder, Winthrop Dir. of Community Development
Ms. Mary Kelley, Chairman, Winthrop Conservation Commission
Mr. Thomas N. Reilly, Jr., MWRA
Mr. Dan O'Brien, MWRA
Mr. Jack Elwood, MWRA
Mr. Charles Gardiner, MWRA
Ms. Marilyn Hotch, MWRA
Ms. Polly Bradley, Outfall Subcommittee
Mr. John Gall, CDM
Mr. Harlan Doliner, McGregor, Shea & Doliner